



National Aeronautics and
Space Administration

Information Summaries

NP-1999-05-002JSC
May 1999

NASA Facilities

Each National Aeronautics and Space Administration (NASA) facility has its own special area of responsibility. Please refer to the appropriate center for information on a specific topic.

NASA HEADQUARTERS **Washington, DC 20546-0001**

NASA Headquarters exercises management over the space flight centers, research centers, and other installations that constitute NASA. Responsibilities of Headquarters cover the determination of programs and projects; establishment of management policies, procedures, and performance criteria; evaluation of progress; and the review and analysis of all phases of the aerospace program. Planning, direction, and management of NASA's research and development programs are the responsibility of seven program offices which report to and receive overall guidance and direction from an associate or assistant administrator.

AMES RESEARCH CENTER **Moffett Field, CA 94035-1000**

Ames Research Center (ARC) was established in December 1939 as the second aeronautical research laboratory of the National Advisory Committee on Aeronautics (NACA). Today, Ames is recognized as one of NASA's pre-eminent research and technology development facilities, with programs spanning aeronautics; trans-atmospherics; the space, Earth, and life sciences; space technology; and information systems.

Located on the 1,000-plus acre Moffett Federal Airfield, the Ames campus employs civil service and support service contractor personnel. Ames is a principal center for computational fluid dynamics, rotorcraft and powered-lift

technology, artificial intelligence, and airborne sciences. Other specialties include flight simulation, robotics, human factors research, advanced life support research, pathfinding research in the fundamental biological sciences, origin of life and exobiology research, and wind tunnel design, development, and operation.

Among its advanced facilities, Ames boasts the National Full-Scale Aerodynamics Complex (NFAC)—the world's largest wind tunnel; the Numerical Aerodynamic Simulation (NAS) facility—perhaps the world's most powerful supercomputer complex and a national pathfinder laboratory which is a unique national facility; and the Vertical Motion Simulator (VMS)—a six-degree-of-freedom simulator believed to be the most sophisticated simulation facility in existence. The Center also has a number of other facilities of critical national importance that contribute to the stability and material well-being of the American people, the U.S. economy, and the people of the world.

DRYDEN FLIGHT RESEARCH CENTER **Edwards, CA 93523-0273**

Since 1947, the Hugh L. Dryden Flight Center (Ames-Dryden) has conducted unique and highly specialized flight research programs. Its test organization, consisting of pilots, scientists, engineers, technicians, and mechanics, has demonstrated its capability with high-speed research aircraft as well as with unusual flight vehicles such as the lunar landing research vehicle and wingless lifting bodies. Approach and landing tests for the Space Shuttle were conducted at Dryden and the facility continues to support Space Shuttle landings from space as well as processing the Space Shuttle for ferry flights to the launch site. Preparations are being made for the flight test program of the X-30, an experimental vehicle of the National Aero-Space Plane Program.

GODDARD SPACE FLIGHT CENTER
Greenbelt, MD 20771-0001

Established in 1959, the Goddard Space Flight Center (GSFC) is named for Dr. Robert H. Goddard, American pioneer in rocket research. Located on 1,100 acres of Maryland countryside just outside Washington, DC, the Center is responsible for expanding the knowledge of Earth and its environment, the solar system, and the universe through observations from space. It is NASA's lead center for two of NASA's major programs—the Hubble Space Telescope and the Mission to Planet Earth—and serves as the major center for tracking satellites and maintaining communications with them. Thousands of people work at Goddard and its satellite sites—the Wallops Flight Facility in Virginia and the Goddard Institute for Space Studies in New York City.

JET PROPULSION LABORATORY
Pasadena, CA 91109-8099

The Jet Propulsion Laboratory (JPL) is a research, development, and flight center operated for NASA by the California Institute of Technology. The Laboratory's primary role is the investigation of the solar system through the use of robotic scientific spacecraft. JPL is also responsible to NASA for supporting research and advanced development related to flight projects. The Laboratory also designs and operates the Deep Space Network of antennas to communicate with lunar and interplanetary spacecraft like Voyagers 1 and 2, Ulysses, and missions to Mars.

JOHNSON SPACE CENTER
Houston, TX 77058-3696

Established as the Manned Spacecraft Center in 1961, the Lyndon B. Johnson Space Center (JSC), named in honor of the late President, is responsible for the design, development, and operation of human space flight. For more than three decades, JSC has been the world leader in human space flight operations for NASA. JSC is the training base and home for our nation's astronauts and the site of Mission Control, where a talented cadre of flight controllers monitors the work of our women and men in space. The operations at JSC include the development, production, and delivery of the Space Shuttle orbiters; the testing of spacecraft associated systems; the development and integration of experiments for human space flight activities; the application of space technology and its supporting scientific engineering and medical research; the selection and training of astronauts; and the operation of human space flights.

The Mission Control Center for U.S. human space flights is at JSC. Scientists and technicians continue to analyze the precious collection of lunar samples brought back from the Moon during Project Apollo. JSC also is the host center for the International Space Station Program Office. The Program Office is responsible for the design and integration of the U.S. laboratory and habitat modules and works in close coordination with the international partners in the development of their modules.

KENNEDY SPACE CENTER
Kennedy Space Center, FL 32899-0001

The John F. Kennedy Space Center (KSC) is the nation's spaceport, the liftoff site for all manned missions into space. About three-million people a year visit KSC, and most take tours of the Shuttle launch facilities. Today KSC performs the highly specialized function of preparing Space Shuttles and their cargoes for launch. In the 13 years after its first launch in 1981, the Space Shuttle fleet completed over 60 missions. Most were scientific in nature, but some included launching applications satellites and performing on-board experiments in the fields of communications, meteorology, and Earth sensing. All manned Mercury, Gemini, Apollo, Skylab, Apollo-Soyuz, and Space Shuttle flights were launched by KSC from launch pads on KSC and Cape Canaveral Air Station.

Prior to 1990, KSC also was responsible for launching unmanned spacecraft on Delta and Atlas-Centaur vehicles, from pads on Cape Canaveral; Delta vehicles were also launched from pads at Vandenberg Air Force Base in California. Unmanned launch responsibilities were assumed by the vehicle builders and the U.S. Air Force in 1989. Before that, KSC had launched over 250 vehicles, with spacecraft operating in every field from technological innovation to interplanetary exploration.

KSC also will perform the checkout, assembly, and launch of the component parts of the International Space Station and serve as the primary site for launching Space Shuttles to provide logistics support and personnel rotation.

LANGLEY RESEARCH CENTER
Hampton, VA 23681-0001

The Langley Research Center (LaRC), established in 1917 as the first national civil aeronautical laboratory, has been instrumental in shaping aerospace history for more than seven decades. Today, the Center remains dedicated both to serving traditional aerospace customers and to transferring aerospace technology to non-traditional aerospace customers in response to changing national priorities. Langley's primary mission is basic research in aeronautics and space technology. Research fields include aerodynamics, materials, structures, acoustics, flight systems, information systems, spacecraft analysis, and atmospheric sciences.

LaRC is lead center for management of the Agency's technology development programs for future High-Speed Civil Transport, for hypersonic vehicle concepts, and for general aviation. Langley manages a dynamic program in atmospheric sciences, seeking a more detailed understanding of the origins, chemistry, and transport mechanisms that govern the Earth's atmosphere, with a special emphasis on the impact of human activity.

**JOHN H. GLENN RESEARCH CENTER AT LEWIS FIELD
Cleveland, OH 44135-3191**

John H. Glenn Research Center at Lewis Field (GRC) is NASA's lead for research, technology, and development in aircraft propulsion, space propulsion, space power, and satellite communication. Aircraft propulsion activities in the early days of the jet age consisted of the development of aircraft which would fly higher, faster, and farther. Today's goals are fuel conservation, quieter flight, and cleaner exhaust. It is also the home of the Microgravity Materials Science Laboratory, a unique facility to qualify potential space experiments. Other facilities include a zero-gravity drop tower, wind tunnels, space environment tasks, chemical rocket thrust stands, and chambers for testing jet engine efficiency and noise.

**MARSHALL SPACE FLIGHT CENTER
Huntsville, AL 35812-0001**

NASA's George C. Marshall Space Flight Center (MSFC) in Huntsville, Alabama, leads the Agency in space transportation and propulsion development. It furnishes the solid rocket boosters, main engines and external tank for every Space Shuttle flight. Center engineers are now designing the next generation of space launch vehicles to provide the nation with continued safe, economical, and reliable access to space.

MSFC has a vital role in key scientific missions. It is a leader in science research in the fields of microgravity, space physics, and astrophysics. The Center is developing NASA's next large space observatory, the Advanced X-Ray Astrophysics Facility. It provides payload integration and operations for experiments aboard the Shuttle and Spacelab and has the major role in developing and integrating Space Station payloads. MSFC is NASA's center of excellence for Earth Observing System global water studies.

MSFC uses its extensive research, technology, and advanced development facilities to build a strong technological base for future space activities, then transfers that technology to American history.

**STENNIS SPACE CENTER
Stennis Space Center, MS 39529-6000**

The John C. Stennis Space Center (SSC) in South Mississippi provides the facilities, equipment, and technical support necessary to develop and flight certify the Space Shuttle Main Engines. Because of its important role in engine testing over the past three decades, SSC has been designated as NASA's center of excellence for large propulsion systems testing. The center also has the assignment to build the facilities and capabilities to test the propulsion systems hardware for the future.

Personnel at SSC are also involved in a broad range of research and technology projects, including the development of remote sensing technology, Earth sciences research, associated data systems development, and tech-

nology transfer. SSC is NASA's lead center for commercial remote sensing activities. Included in the center's remote sensing mission is the management of the commercial aspects of NASA's Small Satellite Technology Program.

SSC personnel also work on numerous science projects to increase understanding of each planet, including preserving the tropical rain forest in Central America, studying sea surface temperatures to determine conditions for red tide outbreak, plant stress analysis, and monitoring cultural and archaeological sites.

SSC is unique in NASA in that the center serves as host to 22 other federal and state agencies and university elements involved in environmental and oceanographic programs.

**WALLOPS FLIGHT FACILITY
Wallops Island, VA 23337-5099**

Wallops Flight Facility, located on Virginia's eastern shore, is one of the oldest and busiest ranges in the world. Some 300 experiments are sent aloft each year on vehicles which vary in size from small meteorological rockets to the four-stage Scout with orbital capability. The launches increase knowledge of the upper atmosphere and the space environment. A sizable portion of Wallops' effort is devoted to aeronautical research and development and in reporting the nation's space technology to the international community.

**WHITE SANDS TEST FACILITY
Las Cruces, NM 88004-0020**

The White Sands Test Facility (WSTF) was built in 1964 to support ground testing of the spacecraft propulsion systems for the Apollo program. WSTF occupies a 94-square-mile corner of the U.S. Army's White Sands Missile Range and is a tenant of that range under an agreement between NASA and the U.S. Army. The NASA Johnson Space Center is responsible for operations at WSTF, which now supports the Space Shuttle on-orbit propulsion systems and performs laboratory testing on materials proposed for use on the Space Shuttle and International Space Station. Space Shuttle pilots practice landing approaches in Shuttle training aircraft on runways at the White Sands Space Harbor, located about 40 miles from WSTF.

Requests for publications should be directed to the Public Mail Office at the NASA installation which serves your state.

If you live in	Write to	If you live in	Write to
Washington Oregon Idaho Montana Wyoming California Nevada Utah Arizona Alaska Hawaii	Ames Research Center Moffett Field, CA 94035-1000	Iowa Missouri Arkansas Tennessee Alabama Louisiana	Marshall Space Flight Center Marshall Space Flight Center, AL 35812-0001
Maine New Hampshire Vermont Massachusetts Connecticut Rhode Island New York Pennsylvania Delaware New Jersey Maryland District of Columbia	Goddard Space Flight Center Greenbelt Road Greenbelt, MD 20771-0001	Ohio Indiana Illinois Michigan Wisconsin Minnesota	John H. Glenn Research Center at Lewis Field 21000 Brookpark Road Cleveland, Ohio 44135-3191
North Dakota South Dakota Nebraska Kansas Oklahoma Texas Colorado New Mexico	Johnson Space Center 2101 NASA Road One Houston, TX 77058-3696	Virginia West Virginia Kentucky North Carolina South Carolina	Langley Research Center Hampton, VA 23681-0001
		Florida Puerto Rico Virgin Islands Georgia	Kennedy Space Center Kennedy Space Center, FL 32899-0001
		Mississippi	Stennis Space Center Stennis Space Center, MS 9529-6000
		Send inquiries related to space and planetary exploration:	NASA Jet Propulsion Laboratory Pasadena, CA 91109-8099

